

CHARGE NUMBER: 1803
PROGRAM TITLE: New Primary Processes
PERIOD COVERED: March 1 - 31, 1977
PROJECT LEADER: T. A. Newman

I. Microwave Processing

The 915 MHz power supplies were installed and the applicator modifications were completed. Initial equipment checkout resulted in several electrical anomalies in both 915 MHz power supplies. An engineer from Gerling Moore was sent to troubleshoot these problems and repair is currently in progress.

Experiments were initiated using the 2450 MHz equipment to examine the conditions necessary to kill weed seeds in farm soil. Results will be used to evaluate the economic feasibility of sterilizing tobacco fields prior to planting. Hopefully, this would allow tobacco seeds to be planted directly in the field, thereby eliminating the step of transplanting the seedlings from beds. Initial results¹ show that morning glory, ragweed and crab grass seeds do not germinate after soil temperatures have been raised to 200°F. As might be expected, the energy requirements (application times) are a strong function of soil moisture. Tests are in progress to better define the energy versus moisture characteristics.

II. Pneumatic Conveying

The rotary valve tests were completed using both ET and filler. Sieve results² showed no statistical trend that would indicate these materials experienced any reduction in piece size when passed through this particular rotary valve.

The equipment for the pneumatic conveying installation has been received and installed. Electrical and plumbing hookups should be completed in several weeks.

III. References

¹J. C. Lang - Notebook 7066, p. 16.

²" " " - " " , pp. 19 - 22.

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